

Claims

1. A magnetic recording medium comprising a direct texture glass or glass-ceramic substrate and a film structure directly on the direct texture glass or glass-ceramic substrate, wherein the medium is an oriented longitudinal magnetic recording medium having Mrt OR of 1.5 or more.
2. The medium of claim 1, wherein the medium has SNR of greater than 2dB over an isotropic medium with a defined film structure directly on a non-textured glass or glass-ceramic substrate, the defined film structure being identical to the film structure directly on the direct texture glass or glass-ceramic substrate.
3. The medium of claim 1, wherein the film structure comprises an oxidized NiP layer.
4. The medium of claim 3, wherein the oxidized NiP layer is directly on the direct texture glass or glass-ceramic substrate.
5. The medium of claim 3, further comprising a NiNb layer between the oxidized NiP layer and the direct texture glass or glass-ceramic substrate.
6. The medium of claim 5, wherein the NiNb layer is directly on the direct texture glass or glass-ceramic substrate.

7. The medium of claim 3, wherein the oxidized NiP layer has a texture resulting substantially from a texture of the texture glass or glass-ceramic substrate and the texture of the oxidized NiP is not a mechanical texture.

8. The medium of claim 3, wherein a thickness of the oxidized NiP layer is in the range of about 60-150Å.

9. The medium of claim 3, wherein the film structure further comprises a Cr-containing underlayer on the oxidized NiP layer.

10. The medium of claim 1, wherein the Mrt OR of 1.5 or more.

11. A method for manufacturing a magnetic recording medium comprising introducing a direct texture glass or glass-ceramic substrate into a sputtering chamber and forming a film structure on the direct texture glass or glass-ceramic substrate without removal of the glass or glass-ceramic substrate from the sputtering chamber.

12. The method of claim 11, wherein the medium is an oriented longitudinal magnetic recording medium having Mrt OR of 1.5 or more.

13. The method of claim 11, wherein the medium has SNR of greater than 2dB over an isotropic medium with a defined film structure directly on a non-textured

glass or glass-ceramic substrate, the defined film structure being identical to the film structure directly on the direct texture glass or glass-ceramic substrate.

14. The method of claim 11, wherein the film structure comprises an oxidized NiP layer.

15. The method of claim 14, wherein the oxidized NiP layer has a texture resulting substantially from a texture of the texture glass or glass-ceramic substrate and the texture of the oxidized NiP is not a mechanical texture.

16. The method of claim 14, wherein the oxidized NiP layer is formed under a partial pressure of oxygen of between about 2 mT to 20 mT in the sputtering chamber.

17. The method of claim 14, wherein the oxidized NiP layer is deposited at about ambient temperature.

18. The method of claim 14, wherein the film structure further comprises a Cr-containing underlayer on the oxidized NiP layer.

19. The method of claim 18, wherein the Cr-containing underlayer is deposited at a temperature of about 120°C to 250°C.

20. A magnetic recording medium comprising a direct texture glass or glass-ceramic substrate and means for recording data, wherein the medium is an oriented longitudinal magnetic recording medium having Mrt OR of 1.5 or more.